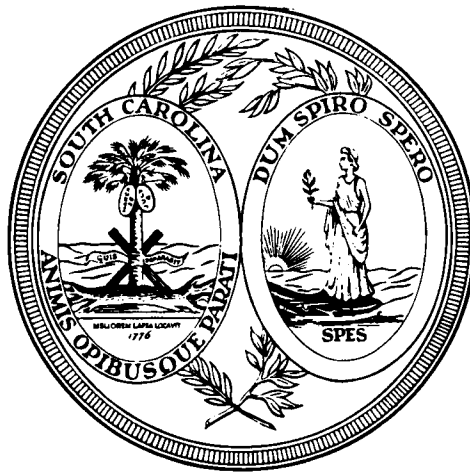


# **Regulation 61-56**

## **Individual Waste Disposal Systems**



**C. Earl Hunter**  
**Commissioner**

**Effective July 2002**



## **SECTION I - PURPOSE**

A major factor influencing the health of individuals where public sewers are not available is the proper treatment and disposal of human excreta and other domestic waste. Many diseases, such as dysentery, infectious hepatitis, typhoid and paratyphoid, and various types of diarrhea are transmitted from one person to another through the fecal contamination of food and water, largely due to the improper disposal of human wastes. For this reason, every effort should be made to prevent such hazards and to treat and dispose of all human waste so that no opportunity will exist for contamination of water or food, or transmission of human waste by flies or other vectors.

Safe treatment and disposal of all human and domestic waste is necessary to protect the health of the individual family and the community, and to prevent the occurrence of nuisances. To accomplish satisfactory results, such wastes must be disposed of so that:

- A. They will not contaminate any drinking water supply.
- B. They will not give rise to a public health hazard by being accessible to insects, rodents, or other possible carriers which may come into contact with food or drinking water.
- C. They will not give rise to a public health hazard by being accessible to children.
- D. They will not violate laws or regulations governing water pollution or sewage disposal.
- E. They will not pollute or contaminate any drainage ditch or the waters of any bathing beach, shellfish breeding ground, or stream used for public or domestic water supply purposes, or for recreational purposes.
- F. They will not give rise to a nuisance due to odor or unsightly appearance.

Where the installation of an individual sewage disposal system is necessary, the basic principles of design, construction, installation and maintenance should be followed.

## **SECTION II - DEFINITIONS**

- A. **GREASE TRAP** - A unit designed to remove grease and fat from commercial food preparation wastes.
- B. **LINT TRAP** - A unit designed to remove lint from commercial laundromat wastewater.
- C. **OIL/WATER SEPARATOR** - A unit designed to remove oil and grease from vehicle wash wastewater.
- D. **INDIVIDUAL SEWAGE TREATMENT AND DISPOSAL SYSTEM** - A system designed for the treatment and disposal of sewage by means of the following:
  - 1. **Initial Treatment**
    - a. **Septic Tank** - A watertight, covered receptacle designed and constructed to receive the discharge of sewage from a building sewer, separate solids from the liquid, digest organic matter and store digested solids through a period of detention and biological conditioning of liquid waste, and allow the clarified liquid to discharge for final treatment and disposal.
    - b. **Alternate System** - Any system for the initial treatment of sewage which deviates from the conventional system described herein and for which standards have been established by the Health Authority.
  - 2. **Final Treatment and Disposal**
    - a. **Conventional Soil Absorption Trench** - A trench placed in the soil for the purpose of facilitating final treatment and disposal of sewage effluent and as described in Section VII.

- b. **Alternate System** - Any system for the final treatment and disposal of sewage which deviates from the conventional system described herein and for which standards have been established by the Health Authority.
- E. **HEALTH AUTHORITY** - An authorized representative of the South Carolina Department of Health and Environmental Control.
- F. **PERMIT** - A written statement issued by the Health Authority permitting the construction of an individual sewage treatment and disposal system under this regulation.
- G. **SEWAGE** - The liquid and solid human body waste and the liquids generated by water-using fixtures and appliances from any residence, place of business or place of public assembly. For the purpose of this regulation, sewage shall not be construed to include industrial process wastewater.

### **SECTION III - GENERAL**

- A. Each dwelling unit, building, business or other structure occupied for more than two (2) hours per day shall be provided with approved facilities for the treatment and disposal of sewage. For businesses or facilities not otherwise producing sewage, such as, but not limited to, photo shops in shopping center parking lots, firework stands, etc., "provide" shall mean accessible to the occupants.
- B. It shall be the responsibility of the property owner to ensure that a permit to construct an individual sewage disposal system is obtained from the Health Authority prior to construction of the system.
- C. The general contractor (or prime contractor, or person constructing the building) shall not begin construction of the building until a permit to construct an individual sewage treatment and disposal system is issued by the Health Authority. Also, no mobile or modular structure intended for occupancy shall be moved onto the site until the permit to construct has been issued.
- D. An individual sewage treatment and disposal system serving more than one (1) piece of deeded property (i.e., multiple ownership) shall be considered as a public collection and treatment facility.

### **SECTION IV - APPLICATION, PERMIT, APPROVAL**

#### **A. APPLICATION**

- 1. The property owner or his agent shall furnish, on the application form provided by the Health Authority, correct information necessary for determining the feasibility of an individual sewage treatment and disposal system.
- 2. A boundary plat, deed or other legal document specifying the lot size and its boundaries shall be furnished by the property owner or his agent.
- 3. Other pertinent information may be required when deemed necessary by the Health Authority.
- 4. Before a site evaluation of the lot is performed by the Health Authority, the property owner or his agent may be required to clear site lines and post an identification marker in the front center of the lot, and may be required to place stakes at the corners of the proposed building, at the proposed point of stubout, and at the proposed or existing well location.

#### **B. PERMIT**

- 1. It shall be unlawful to construct an individual sewage treatment and disposal system unless a valid permit has been issued by the Health Authority for the specific construction proposed. The system shall be constructed in accordance with the permit. Changes to the construction of the system must be authorized by the Health Authority prior to their implementation. The Health Authority may also require a permit for the repair, extension or alteration of an individual sewage treatment and disposal system, as deemed necessary.

2. The individual sewage treatment and disposal system shall be constructed according to the specifications, as stated in the permit and in this regulation.
  3. In the case of repairs to existing individual sewage treatment and disposal systems, the Health Authority may authorize the best possible method of repair that, in their opinion, may improve the operation of the system, regardless of site conditions.
  4. The permit shall become void if any of the original conditions upon which it was issued are changed.
- C. **APPROVAL** - Any repair, extension or alteration for which a permit has been issued and all newly constructed systems shall remain in an exposed condition until final inspection and approval has been granted by the Health Authority.

## **SECTION V - MINIMUM SITE CONDITIONS**

- A. Soil texture, depth of soil to rock and maximum seasonal high water table elevation shall meet minimum standards as required by the Health Authority.
- B. The maximum seasonal high water table elevation shall not be less than six (6) inches below the bottom of the proposed soil absorption trenches or alternate system.
- C. Depth to rock and other restrictive horizons shall be greater than one (1) foot below the bottom of the proposed absorption trenches or alternate system.
- D. Where the maximum estimated wastewater flow from a new facility exceeds fifteen hundred (1500) gallons per day, the individual sewage treatment and disposal system shall meet large system standards developed by the Health Authority.
- E. The area of the lot or plot of ground where the individual sewage treatment and disposal system is to be installed shall be of sufficient size so that no part of the system will be:
  - (a) within five (5) linear feet of a building or property line or under a building, driveway or parking area;
  - (b) within a minimum of fifty (50) linear feet from a private well or within the minimum distance as established by the Health Authority from a public well;
  - (c) within fifty (50) linear feet of the mean high water elevation (tidal waters) or ordinary high water (within the banks) elevation (non-tidal waters) of an impounded or natural body of water, including streams and canals;
  - (d) within ten (10) feet of upslope and twenty-five (25) feet of downslope interceptor drains;
  - (e) within twenty-five (25) feet of a drainage ditch or within fifteen (15) feet of the top of the slope of embankments or cuts of two (2) feet or more vertical height when the soil absorption area of a trench is to be placed higher in elevation than the invert of a cut, ditch or gully.
- F. In addition to the minimum space required in Section V.E., minimum repair area shall be set aside as follows:
  1. Sites meeting the minimum standards for an alternative/experimental (temporary) system developed by the Health Authority as authorized by this regulation shall have a minimum repair area 50% the size of the original system.
  2. Sites utilizing individual sewage treatment and disposal systems serving food service facilities, laundromats, and car washes shall have a minimum replacement area 50% the size of the original system.

- G. In addition to the above, if individual sewage treatment and disposal systems serving condominium units and similar type facilities (multiple sewage stubouts from a common building or from a cluster of dwellings on small lots) are to be installed in an area where the soil absorption systems will be contiguously located, each site shall be increased in size to 50% over that which is required for a single system. Each site shall be deeded as a lot in conjunction with the specific unit that it serves, and required protective offsets, as described in Section V.E., from adjacent property lines, shall apply.

## **SECTION VI - MINIMUM REQUIREMENTS FOR INITIAL TREATMENT SYSTEM**

### **A. SEPTIC TANK**

1. All persons or firms manufacturing septic tanks for use in South Carolina shall submit detailed plans for each size tank to the Health Authority and shall receive written approval for such tanks prior to their installation in the state.
2. The design and construction of each septic tank shall be in accordance with minimum design and construction criteria established by the Health Authority.
3. No septic tank shall be installed which has a net liquid capacity of less than eight hundred ninety (890) gallons.
4. Septic tanks serving individual dwellings shall be sized according to the number of bedrooms, as set forth in the following table:

**MINIMUM CAPACITIES OF SEPTIC TANKS SERVING INDIVIDUAL DWELLINGS**

<b>Number of Bedrooms</b>	<b>Minimum Net Liquid Capacity</b>
2 or less	890
3 or 4 *	1,000

\* For each additional bedroom, add 250 gallons.

5. Septic tanks serving establishments other than individual dwellings shall be sized according to actual flow data, when available, or by estimates of sewage flow, as set forth in standards established by the Health Authority. The following table shall be used in sizing septic tanks for this purpose.

**MINIMUM CAPACITIES OF SEPTIC TANKS SERVING ESTABLISHMENTS  
OTHER THAN INDIVIDUAL DWELLINGS**

<b>Actual or Estimated Flow (gal. per day)</b>	<b>Minimum Net Liquid Capacity (gallons)</b>
593 or less	890
593 - 1500	1.5 x Daily Flow
1500 or greater	1125 + 75% of Daily Flow

6. When actual or estimated sewage flow exceeds fifteen hundred (1500) gallons per day, the Health Authority may require that the design of the individual sewage disposal system be prepared by a Registered Professional Engineer licensed by the State of South Carolina.

### **B. ALTERNATE SYSTEM**

1. Where conditions may warrant its use, the Health Authority may consider an alternative system for the initial treatment of sewage.
2. No alternate system shall be used unless standards for the specific system have been established by the Health Authority.

## **SECTION VII - MINIMUM REQUIREMENTS FOR FINAL TREATMENT AND DISPOSAL SYSTEM**

### **A. GENERAL**

1. Only distribution pipe having received written approval from the Health Authority may be utilized in individual sewage disposal systems. This approval shall be based upon the pipes meeting all applicable ASTM standards.
2. The coarse aggregate used in individual sewage disposal systems shall be a material approved by the Health Authority and shall range in size from one-half ( $\frac{1}{2}$ ) inch to two and one-half ( $2\frac{1}{2}$ ) inches. Fines must be prohibited.
3. Distribution and drop boxes shall be installed when deemed necessary by the Health Authority. When drop boxes are used, they shall be stabilized by undisturbed or manually compacted earth with each soil absorption trench being fed through at least two (2) feet of solid pipe prior to entering the coarse aggregate. The invert of the drop box overflow pipe shall be at the same elevation as the top of the coarse aggregate in the trenches fed by that box. Also, when utilizing serial distribution, the top of the coarse aggregate shall be level. Other methods that affect serial distribution, such as earthen dams, shall also overflow at the same elevation as the top of the coarse aggregate.

### **B. CONVENTIONAL ABSORPTION TRENCH**

1. Conventional soil absorption trenches must be at least twenty-three (23) inches deep.
2. The distribution pipe and bottoms of the soil absorption trenches shall be as level as possible with a slope not to exceed four (4) inches per one hundred (100) linear feet from the beginning to the end of each trench.
3. The bottom width of the soil absorption trenches shall not be less than eighteen (18) inches, nor more than thirty-six (36) inches, and there shall not be less than seven (7) feet of undisturbed earth between each trench.
4. There shall be at least six (6) inches of coarse aggregate beneath the distribution pipe, five (5) inches surrounding the distribution pipe, and three (3) inches over the pipe. The coarse aggregate shall be level across the trench width.
5. The required number, length and configuration of conventional soil absorption trenches shall be determined by the Health Authority and shall be based upon the number of bedrooms per dwelling or the number of persons using the facilities, and soil conditions.
6. The coarse aggregate over the distribution pipe shall be covered with a strong, untreated pervious material to prevent infiltration of backfill material.
7. The depth of earth over the coarse aggregate shall not be less than nine (9) inches.

### **C. ALTERNATE SYSTEM**

1. Where conditions may warrant its use, the Health Authority may consider an alternate system for the final treatment and disposal of sewage.
2. No alternate system shall be used unless standards for the specific system have been established by the Health Authority.

## **SECTION VIII - CONSTRUCTION CRITERIA**

- A. On sloping terrain, soil absorption trenches shall be installed so as to follow the contours of the land.

- B. All rough grading of the lot shall be done prior to the installation of the individual sewage treatment and disposal system, where deemed necessary by the Health Authority.
- C. The area in which the individual sewage treatment and disposal system is located shall be protected from surface water and roof or downspout drainage.
- D. All dirt, mud and debris shall be removed from the septic tank before backfilling, and all backfilling around the tank shall be tamped to facilitate stabilization.
- E. If septic tank lids are of slab-type construction, all joints shall be calked or covered with heavy roofing paper or similar material.
- F. If septic tanks are of two-piece construction joined by tongue and groove, the joint shall be cemented to prevent leakage.

#### **SECTION IX - GREASE TRAPS, LINT TRAPS AND OIL/WATER SEPARATORS**

- A. Commercial food preparation establishments shall be required to have a grease trap on the kitchen wasteline preceding the individual sewage treatment and disposal system. The grease trap shall be designed in accordance with standards established by the Health Authority.
- B. All commercial laundromats shall be required to have a lint trap on the laundry sewer line preceding the main septic tank. The lint trap shall be designed in accordance with standards established by the Health Authority.
- C. All vehicle wash facilities shall be required to have an oil/water separator on the sewer line preceding the main septic tank. The oil/water separator shall be designed in accordance with standards established by the Health Authority.

#### **SECTION X - PUBLIC SEWER ACCESSIBILITY**

- A. Permits for new individual sewage treatment and disposal systems shall not be issued where public sewer is accessible for connection.
- B. Repairs to existing individual sewage treatment and disposal systems shall not be permitted where public sewer is accessible for connection.

#### **SECTION XI - DISCHARGE OF WASTE**

No septic tank effluent or filter effluent shall be discharged to the surface of the ground or into any stream or body of water in South Carolina.

#### **SECTION XII - PERMIT FEES**

If a fee system is hereafter established by the Department of Health and Environmental Control, proof of payment of the fee shall accompany each application. If such proof is not so presented, the permit shall not be processed until such proof is received.

#### **SECTION XIII - ENFORCEMENT INTERPRETATION**

This regulation is issued under the authority of Section 44-1-140 (11) of the 1976 Code of Laws, as amended, and Section 48-1-10 et seq. of the 1976 Code of Laws, as amended. It shall be enforced by the Health Authority in accordance with interpretations and public health reasons approved by the South Carolina Department of Health and Environmental Control. The Health Authority may, at its discretion, establish policies and standards concerning all aspects of individual sewage treatment and disposal.

#### **SECTION XIV - PENALTIES**

Violations of this regulation shall be punishable in accordance with Section 44-1-150, Code of Laws of South Carolina, 1976, and each day of continued violation shall be a separate offense.

#### **SECTION XV - REPEAL AND DATE OF EFFECT**

This regulation shall become effective as provided in Section 1-23-10 et seq. of the 1976 Code of Laws of South Carolina, as amended, and shall repeal Department of Health and Environmental Control Regulation 61-56 of the Code of Laws of South Carolina, 1976.

#### **SECTION XVI - UNCONSTITUTIONALITY CLAUSE**

Should any section, paragraph, sentence, clause or phrase of this regulation be declared unconstitutional or invalid for any reason, the remainder of said regulation shall not be affected thereby.

**Statutory Authority:** Section 44-1-140 (11) and Section 48-1-10 et seq. of the 1976 Code of Laws, as amended.